

What is claimed is:

- Sub 5
A17
1. A compact disc processing system comprising:
a printer for printing indicia on a first compact disc;
a recorder for recording information on the first compact disc; and
a transporter carriage for holding the first compact disc and moving the first compact disc between the recorder and printer, the transporter carriage comprises a rotatable gripping head having first and second gripping locations each for respectively holding the first and a second compact disc simultaneously.

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2. The compact disc processing system of claim 1 wherein the transporter carriage holds the first and second compact discs using a vacuum.

3. The compact disc processing system of claim 1 wherein the rotatable gripping
15 head can rotate about a horizontal axis.

- 4.3 The compact disc processing system of claim 1 wherein the transporter carriage is moveable in both a horizontal and a vertical direction.

- 20 4/5. The compact disc processing system of claim 1 further comprising a compact disc organizer comprising:

- a plurality of disc trays; and
a selection mechanism coupled to the plurality of disc trays for selectively moving the plurality of disc trays such that the first compact disc can be placed on the
25 selected disc tray for temporary storage.

- 5/6. The compact disc processing system of claim 1 further comprising a supply location having a vertically extending rod sized to fit within a central opening provided in the first compact disc.

7. The compact disc processing system of claim 1 wherein the gripping head includes a motor for selectively rotating the first compact disc about its axis.

8. The compact disc processing system of claim 1 wherein the first and second gripping locations are located on opposite sides of the gripping head and can selectively hold the first and second compact discs using a vacuum.

9. A compact disc processing system comprising:

a supply station for holding a plurality of blank compact discs;

10 a printer for printing indicia on a first compact disc, the printer includes an extendable draw adapted to receive the first compact disc;

a recorder for recording information on the first compact disc, the recorder includes an extendable draw to receive the first compact disc; and

15 a transporter carriage for simultaneously holding the first and a second compact discs, the transporter carriage is moveable in both vertical and a horizontal directions to place and pick up the first compact disc from the drawers of both the recorder and printer, the transporter carriage is moveable in both vertical and a horizontal directions to pick up one of the plurality of blank compact discs held at the supply location,

20 the transporter carriage comprises a pickup arm and a gripping head attached to one end of the pickup arm, the gripping head has first and second gripping locations each for respectively holding the first and second compact discs simultaneously, and the gripping head is rotatable about a horizontal axis of the pickup arm.

10. The compact disc processing system of claim 9 wherein the supply location includes a vertically extending rod sized to fit within a central opening provided in the plurality of blank compact discs.

11. The compact disc processing system of claim 9 further comprising a compact disc organizer comprising:

a plurality of disc trays; and

a selection mechanism coupled to the plurality of disc trays for selectively moving the plurality of disc trays such that the first compact disc can be placed on the selected disc tray for storage.

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1/2. The compact disc processing system of claim 9 wherein the first and second gripping locations are located on opposite sides of the gripping head and can selectively hold the first and second compact discs using a vacuum.

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13. The compact disc processing system of claim 9 wherein the first gripping location includes a centering feature to axially align the first compact disc with the first gripping location.

14. A method of operating a disc processing system comprising a printer for printing indicia on a compact disc, a recorder for recording information on the compact disc, and a transporter carriage for simultaneously holding at least two compact discs, the method comprising:

gripping a first compact disc with the transporter carriage;

moving the transporter carriage to the recorder and placing the first compact disc in the recorder;

moving the transporter carriage to a supply location and gripping a second compact disc with the transporter carriage while the first compact disc is in the recorder;

removing the first compact disc from the recorder with the transporter carriage, such that the transporter carriage simultaneously grips both the first and second compact discs;

placing the second compact disc in the recorder after the first compact disc has been removed; and

moving the transporter carriage to the printer and placing the first compact disc in the printer.

14 15. The method of claim 14¹³ wherein the transporter carriage includes a gripping head having first and second grippers for gripping the first and second compact discs.

15 16. The method of claim 14¹³ wherein the first compact disc is rotated about its axis to a predetermined rotational position prior to placing the first compact disc in the printer.

16 17. The method of claim 14¹³ further comprising:
removing the first compact disc from the printer;
selectively extending a tray of a compact disc organizer; and
10 placing the first compact disc in the extended tray for subsequent removal by a user.

Sub 15 18. A method of operating a disc processing system comprising a printer for printing indicia on a compact disc, a recorder for recording information on the compact disc, and a transporter carriage for simultaneously holding two compact discs, the method comprises in the order of:

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20 gripping a first compact disc with the transporter carriage;
moving the transporter carriage to the recorder and placing the first compact disc in the recorder;
moving the transporter carriage to a supply location and gripping a second compact disc with the transporter carriage while the first compact disc is in the recorder;
removing the first compact disc from the recorder with the transporter carriage, such that the transporter carriage simultaneously grips both the first and second compact discs;
25 placing the second compact disc in the recorder after the first compact disc has been removed; and
moving the transporter carriage to the printer and placing the first compact disc in the printer.

19. A method of operating a disc processing system comprising a printer for printing indicia on a compact disc, a recorder for recording data on the compact disc, and a transporter carriage for simultaneously holding at least two compact discs, the method comprising:

5 either recording data on a first compact disc using a recorder, or printing indicia on the first compact disc with the printer; and

gripping a second compact disc using the transporter carriage while the first compact disc is located in either the recorder or the printer.

10 20. The method of claim 19 further comprises removing the first compact disc from the recorder or printer with the transporter carriage while simultaneously gripping the second compact disc.

15 21. A method of operating a disc processing system comprising a printer for printing indicia on a compact disc, a recorder for recording information on the compact disc, and a transporter carriage for simultaneously holding at least two compact discs, the method comprising:

gripping a first compact disc located in the printer with the transporter carriage;

removing the first compact disc from the printer;

20 moving the transporter carriage to the recorder and gripping a second compact disc located in the recorder with the transporter carriage;

removing the second compact disc from the recorder;

placing the first compact disc in the recorder; and

moving the transporter carriage to the printer; and

25 placing the second compact disc in the printer.

22. A method of operating a disc processing system comprising a printer for printing indicia on a compact disc, a recorder for recording information on the compact disc, and

a transporter carriage for simultaneously holding at least two compact discs, the method comprising:

- gripping a first compact disc located in the recorder with the transporter carriage;
- removing the first compact disc from the recorder;
- 5 moving the transporter carriage to the printer and gripping a second compact disc located in the printer with the transporter carriage;
- removing the second compact disc from the printer;
- placing the first compact disc in the printer; and
- moving the transporter carriage to the recorder; and
- 10 placing the second compact disc in the recorder.

23. A method of operating a disc processing system comprising a recorder for recording data on the compact disc, and a transporter carriage for simultaneously holding at least two compact discs, the method comprising:

- 15 gripping a first compact disc located in the recorder with the transporter carriage;
- removing the first compact disc from the recorder; and
- placing a second compact disc in the recorder without releasing the first compact disc or moving the transporter carriage from the recorder to a compact disc supply location.

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24. A method of operating a disc processing system comprising a printer for printing indicia on a compact disc, and a transporter carriage for simultaneously holding at least two compact discs, the method comprising:

- gripping a first compact disc located in the printer with the transporter carriage;
- 25 removing the first compact disc from the printer; and
- placing a second compact disc in the printer without releasing the first compact disc or moving the transporter carriage from the printer to a compact disc supply location.

25. A method of operating a disc processing system comprising a processing station to perform a processing operation on a compact disc, and a transporter carriage for simultaneously holding at least two compact discs, the method comprising:

- gripping a first compact disc located in the processing station with the
5 transporter carriage,
removing the first compact disc from the processing station; and
placing a second compact disc in the processing station without releasing the
first compact disc or moving the transporter carriage from the processing station to a
compact disc supply location.

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26. The method of claim 25 wherein the processing station is elected from the group comprising a printer to print on the compact disc, a recorder to record data on the compact disc, a verifier to verify data recorded on the compact disc and a reader to read data stored on the compact disc.

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